

Genetics

Library/Research Skills and Technology Lesson Plan

Content Objectives:

- A. Use organizational features of traditional resources/electronic text to locate information.
- B. Utilize computer software to write and revise text and to create visual aids.
- C. Independent research on a genetic issue, an inherited disease or genetic engineering.

Process Objectives:

- 1. Task Definition
 - What is the task?
 - What types of information do I need?
- 2. Information Seeking Strategies
 - What are possible sources?
 - Which are the best?
- 3. Location & Access
 - Where is each source?
 - Where is the information in each source?
- 4. Use of Information
 - How can I best use each source (e.g., reading, viewing, and listening)?
 - What information in each source is useful?
- 5. Synthesis
 - How can I organize all the information?
 - How can I present the result?
- 6. Evaluation
 - Is the task completed?
 - How can I do things better?

Skills to which this lesson is associated:

354.02 – Understand the form and function of DNA.

752.05 – Demonstrate understanding of graphics.

753.06 – Gather, synthesize, and communicate research findings.

Lesson setup and Materials:

- Video projector
- Student ID card/computer rights
- Pen, paper, and disk if working on project at home.
- Assignment sheet – Genetics Project

Lesson introduction:

Begin by presenting previous example of paper/PowerPoint presentations that were exemplary. Present topics and clarify steps of assignment including team assignment. Answer questions.

Lesson dialogue:

One person in the team does the report and one person does the PowerPoint presentation with an oral report.

- PowerPoint oral presentation (2-3 minutes) with 7 to 12 slides. Add information during your speech NOT on slides to get an A grade to prove you know the topic. Minimum work will receive a minimum grade.
- Report (2 pages or 500 words). Any report must be in ink or typed and include a works cited page and MLA documentation. Minimum work will receive a minimum grade.
- Works cited for both projects: Two references are required. If it is Internet, copies of information from the site MUST be included with references.
- If your report or presentation is on a genetic disease you must answer:
What is the disease?
What are the symptoms?
How is it inherited?
What chromosomes is the gene for this disease located?
How is it treated?
Other information like statistics, history, etc.
- If your report or presentation is on a genetic engineering you must answer: What is genetic engineering?
- What product is produced?
- How is the product produced?
- Other information.

Topics:

- | | |
|--|--|
| 1. Huntington's Disease | 13. PKU, phenylketonuria |
| 2. Sickle Cell Anemia | 14. Cystic Fibrosis |
| 3. Marfan Syndrome | 15. Achondroplasia (dwarfism) |
| 4. Tay-Sachs | 16. Thalassemia |
| 5. Spina Bifida & Clubfoot | 17. Downs Syndrome |
| 6. Cleft lip and palate | 18. Progeria |
| 7. Neurofibromatosis | 19. Inherited Alzheimers |
| 8. Hemophilia, all types | 20. Inherited Diabetes |
| 9. Albinos | 21. Osteogenesis imperfecta |
| 10. Turners Syndrome & Klinefelters syndrome | 22. Cloning |
| 11. Baldness | 23. Genetically engineered products, crops, or medicines |
| 12. Muscular Dystrophy | 24. DNA fingerprinting |
| | 25. Stem Cell Research |

Duties:

	TEAM MEMBER	TEAM MEMBER
Each person has one set of notes from two different references.	Yes, library assign. 10 pts Due:	Yes, library assign. 10 pts. Due:
Write works cited page	Yes with report 6 pts	Yes on slide 6 pts.
Oral Report	Assists presentation only	Yes
Write report in ink or type	Yes 60 pts	
Develop PowerPoint	No	Yes 7-12 slides 60 pts
		Copy of slides must be handed in.

Assessment:

Students (in teams of two) complete research and PowerPoint measuring the skills stated above.

Multi-Media Presentation Scoring Guide

Name _____

Required Amount of Note Cards (25 total) _____ **25 points**

Exceptions will be made in certain instances, but you must talk to me.

Research/Documentation _____ **35 points**

Sources

Works Cited Page (correctly formatted) *See Mrs. Earnest*

Time Requirements _____ **25 points**

5 minute minimum/10 minute maximum

Presentation

Organization _____ **25 points**

Focused on the topic and has structure that moves the reader easily from the beginning to the end of the presentation.

PowerPoint _____ **25 points**

The slides that the presenter uses are appropriate to the topic, flow smoothly with the presentation format, and are not being read off of by the presenter. The basis of their presence is to give additional information to the audience, or to reinforce the presenter's main points.

Voice/Eye Contact _____ **10/10 points**

Presentations of a point of view and/or emotions to a specific audience. Presenter appears knowledgeable within the subject area. Eye contact, body language, and annunciation all play a role in voice.

Knowledge and Mastery of Subject _____ **45 points**

The presenter is extremely knowledgeable on their topic, and show that they have obviously rehearsed and read over their information numerous times in preparation for this presentation. They never read off the note cards or PowerPoint, but use them as a way to transition to the next area of their topic, or to remind them of where they left off in a specific area of their topic.

Outline

Each section and sub-topic is separated in a linear and logical order. The outline helps anyone see the exact order and sequence of every topic.

Presentation Total _____ **225 points**